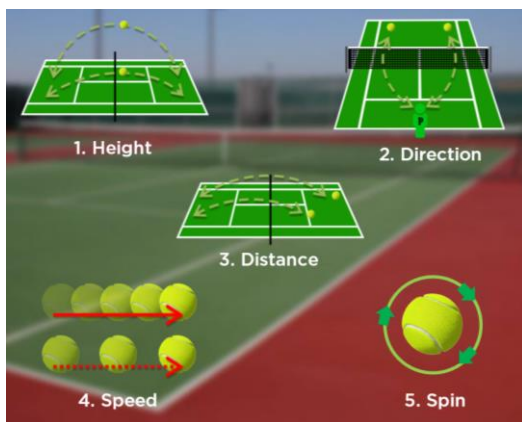


TECHNIQUE FOR SITUATION TRAINING: THE P.A.S. PRINCIPLES

One of the most important concepts in the Canadian Coaching Methodology is the connection of tactics and technique. All game sports require tactics to win, and technique only exists to accomplish tactics whether in hockey, boxing, tennis, etc. This concept is captured in what I call the 'Tactical-Technical Continuum' ([click here for an article on the Tac-Tech Continuum](#))



In its most basic form, the goal of tennis is to “*Make the little round fuzzy ball, go where you want it to.*” There are only five ways to manipulate the ball in tennis. These are called the **5 Ball Control Characteristics**:

- Height
- Direction
- Distance
- Speed
- Spin

To master tennis and perform tactics, a player must learn how to *receive* each of these five characteristics and *send* them as well.

A CRITICAL LINK

Ball control is the bridge that links tactics and a player’s mechanics. Without it, players are handicapped trying to solve ball control problems with their mechanics. This leads to ineffective solutions like ‘*bend your knees more*’ to get height. ‘*Line your body up*’ to control direction, ‘*turn your hips*’ for more power, etc.

None of these body and footwork movements actually control what the ball does. If a coach provides this type of indirect feedback, it often leads to players being frustrated as they can do exactly what the coach said and not have the desired result.

It is physics that governs what is required to make the ball do what is necessary to perform a tactic. In the Canadian methodology, being able to control the ball is called ‘**Effectiveness**’ and is part of technique.

“Ball Control is the bridge that links tactics and a player’s mechanics.”

P.A.S. ELEMENTS

The first step in manipulating any of the 5 Ball Control Characteristics is to imagine a 3-dimensional 'Ball Control Box' surrounding your impact of the ball. Whether groundstroke, volley, or serve, every shot in tennis requires the racquet to 'pass' through that box. I created the acronym **P.A.S.** to remember the key elements.

To maximize the effectiveness of using P.A.S. as a practical tool, coaches need to understand the specific characteristics of each element. These concepts and language become useful in describing the elements and providing precise feedback.

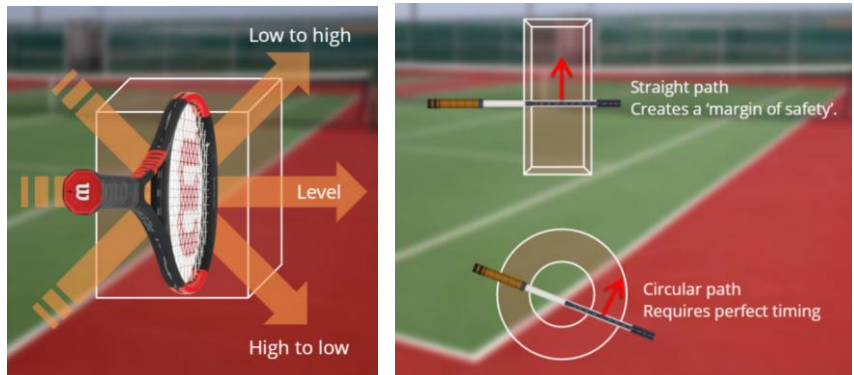
PATH of the racquet through the impact

On the Vertical plane

- Level
- Low to High
- High to low

On the Horizontal plane

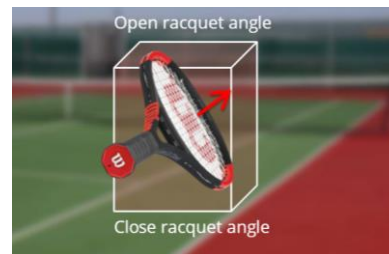
- Circular path
- Linear path ('Straight')



ANGLE of the racquet through the impact

Vertical

- Open (to the sky)
- Closed (to the sky)
- Straight (racquet vertically up & down)



Horizontal (Angling the racquet to the right or left)

- Back (hit the 'back' of the ball. E.g. for a Down-the-line)
- Outside (hit the 'outside' of the ball. E.g. for a Crosscourt)
- Inside (Hit the 'inside' of the ball. E.g. for an 'Inside-out')



SPEED of the racquet through the impact

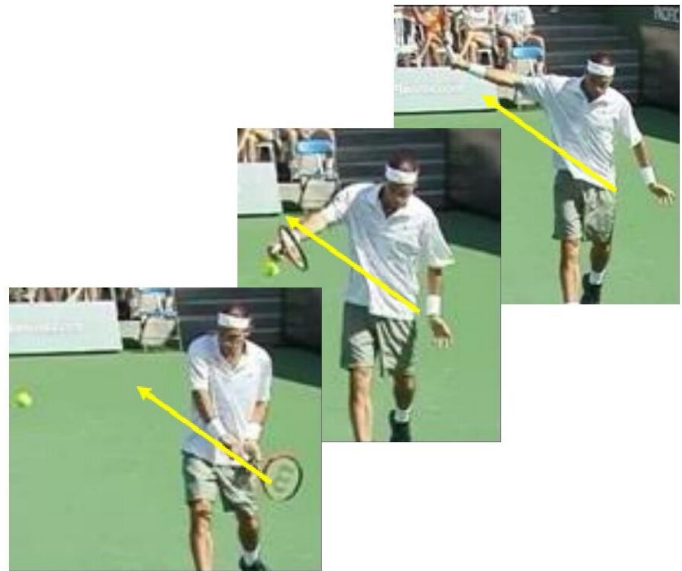
- Accelerating
- Decelerating
- Maintaining speed

PRACTICAL & DIRECT APPLICATION

The P.A.S. Principles are a technical coaching ‘power tool’ because they are based on the physics of the ball-racquet interaction. They **directly determine** what the ball does (or doesn’t) do. Assuming one centres the ball on the strings, the ball cannot go where intended if the P.A.S. is incorrect, and no ball can do something unintended if the P.A.S. is correct.

“The P.A.S. Principles are a technical coaching ‘power tool’ because they are based on the physics of ball-racquet interaction.”

Every shot in tennis is a ‘recipe’ combining varying degrees of each P.A.S. Principle. Even a complex ball control like spin is simply a combination of the appropriate amounts P.A.S. For example, ‘topspin’ would result if the racquet path was low to high, the angle was vertical (or slightly ‘closed’), and the speed was fast (With the same racquet path & angle, more speed increases the amount of spin, less speed decreases it).



P.A.S. for a topspin rally shot

PROBLEM-SOLVING DURING PLAY

To equip players to play successfully, coaches must help players gain a basic understanding of the P.A.S. Principles and how to use them for themselves. The P.A.S. Principles become one of the most powerful problem-solving tools players can use during play. For example, suppose an opponent is on one side of the court, and the player wants to direct the ball to the other side (control direction). In that case, they need to know that the angle of their racquet at impact is a critical determining factor (and not all sorts of other movements they could make).

One of the reasons many players have ‘funky’ technique is precisely because of their misunderstandings about how they are manipulating the ball. They solve their problems through the application of misconceptions. When coaches facilitate learning what really makes the ball do things, it often simplifies their technique.

“The P.A.S. Principles become one of the most powerful problem-solving tools players can use during play.”

A COACHING HIERARCHY

This brings us full circle to the Tactical-Technical continuum mentioned at the start of this article. There is a hierarchy of tactical-technical principles that a coach needs to be mindful of to make their technical coaching the most effective it can be. The P.A.S. Principles are the core of the hierarchy:

- Tactics come first to win.
- The 5 Ball Control Characteristics must be controlled to accomplish the tactic. What to do with the ball (e.g. hit it higher, lower, left, right, etc.) becomes the main intention a player has during play.
- **The P.A.S. Principles are the physics that control the ball. Applying them allows a player to achieve their intention.**
- All the other movements of racquet work, footwork and bodywork players learn are only to ensure the appropriate P.A.S. is being performed for the shot. If the P.A.S. is incorrect, the other movements add up to nothing.

When coaches don't maintain these critical connections, it is called '*isolated technical coaching.*' They end up coaching only the 'look' of the form and not addressing the purpose of the technique. For example, a coach harping on where the player should finish their follow-through will often falsely connect it to depth or direction or power when it doesn't control any of those. It doesn't equip them to control the ball nor does it provide any problem-solving solutions. It can even become harmful as the player creates false connections.

INTERNAL vs EXTERNAL FEEDBACK

Coaches need to be masterful at practically applying the P.A.S. Principles to provide highly practical feedback. One of the reasons the P.A.S. Principles are effective feedback is because they don't fixate a player on how to move their body (called 'Internal' feedback)—using the P.A.S. Principles allows a coach to tap into the power of 'External' feedback, which research shows leads to improved learning.

[\(For an article about Internal vs External Feedback, click here\)](#)

CONCLUSION

The P.A.S. Principles are an essential link in the connection between tactics and technique. They provide a direct way to control the ball and a simple way for players to solve tactical problems effectively on court. It gives a purpose to all the other technical elements they must learn.



Acecoach.com materials are based on the work of top international coach, Louis Cayer.
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